

REMARKS

Claims 1-4 and 6-29 are pending in the application, with claims 15-29 being withdrawn. By this amendment, claims 2, 3, 6, 10-12, and 14 are amended; claims 1 and 4 are cancelled; and claim 30 is newly presented. Applicants request reconsideration and allowance in view of the above amendments and the following remarks.

Claim Rejections

Claims 1, 6, 10, 12, and 14 rejected under 35 U.S.C. § 103(a) based on Shiina, EP 0 698 464 (“Shiina EP”), in view of Abe et al., “Study on Foaming of Crosslinked Polyethylene, and Almanza et al., “The microstructure of polyethylene foams produced by a nitrogen solution process.” **Alternatively, claims 1, 6, 10, 12, and 14** are rejected under 35 U.S.C. § 103(a) based on Shiina EP in view of Shiina et al., JP 2002-192548. **Claims 2-4, 7-9, and 11** are rejected under 35 U.S.C. § 103(a) base on Shiina EP in view of Shiina et al., U.S. 3,987,134 (“Shiina U.S.”). **Claim 13** is rejected under 35 U.S.C. § 103(a) based on Shiina EP in view of Shiina U.S. and further in view of Lammers, U.S. 3,773,875. Applicants request reconsideration and withdrawal of these rejections.

In the present invention, the polyolefin pellets are covered in the whole surface with the plastic.

Shiina EP discloses that the rod of the foamable material 8 is covered with the plastic material 9 and is heated to form a molten state, followed by cutting under compression the molten rod into small pieces so as to obtain the double foamable granular material. See column 9. However, in Example 6, the rod having a diameter of 30 mm was merely cut to prepare the cut pieces each having a length of 30 mm; the rod having a diameter of 30 mm was not compressed. Furthermore, in Example 11, the resultant rod coated with the high-density polyethylene was cut under compression into small pieces each having a length of 18 mm so as to prepare the desired double foamable granular material. Shiina et al. do not disclose that the resultant rod was coated with the high-density polyethylene in the whole rod surface.

Furthermore, Shiina et al. discloses that the foamed bodies constitute a monolayer (see Figure 1E). Shiina et al. do not disclose that the foamed bodies constitute a multilayer, i.e., with the foamed bodies being connected in three dimensions.

Shiina U.S. discloses that it is possible to extrude foamable raw material into a rod, coat it with unfoamable raw material, and seal it by compression or twisting (see column 3). Shiina U.S. also discloses that to restrict as much as possible the escape of gases evolving from a foaming agent, the foamable material is used in an elongate form or with both ends sealed by compression (see column 4).

In Example 5, the tube was cut up into small hollow pellets each 30 mm long which had both ends sealed by heat and pressure. However, in Example 10, the composite rod obtained was merely cut up into small pellets each 30 mm long. Since composite rod obtained was not compressed, each of the small pellets was not coated with the high-density polyethylene in the whole rod surface. Though Shiina U.S. discloses that the rod coated with unfoamable raw material can be sealed by compression, Shiima U.S. discloses no examples of obtaining the small pellets coated with the high-density polyethylene in the whole rod surface. Sealing the end of the tube by heat and pressure is different from cutting the rod coated with unfoamable raw material.

Finally, none of the references discloses a foam composite having a skin with an even thickness and a core comprising foamed bodies with homogeneous and fine bubbles and spherical plastic reinforcing members with an even thickness covering each of the foamed bodies.

Therefore, the rejection should be withdrawn.

In view of the foregoing, Applicants submit that all claims are in condition for allowance, and timely Notice to that effect is respectfully requested.

Respectfully submitted,
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